**Vinod kumar Bellamkonda bkvinod1911@gmail.com**

**Senior Python Developer Phone: 217-220-5102**

**LinkedinProfile:** [**https://www.linkedin.com/in/vinod-bellamkonda-339176221/**](https://www.linkedin.com/in/vinod-bellamkonda-339176221/%20)

**Professional Summary**:

* **Python Developer** with **9+ years** of experience specializing in **data engineering, backend development, and cloud-based solutions**.
* Proficient in **Python and SQL**, with expertise in frameworks like **Django, PySpark, and FastAPI**.
* Strong background in **building scalable ETL pipelines, distributed data processing, and backend APIs**.
* Skilled in **cloud platforms** including **AWS and GCP**, leveraging services like **AWS Glue, S3, Lambda, Athena, Redshift, DynamoDB, SQS, and SNS**.
* Experienced in **CI/CD pipelines** with **Git, Jenkins, Ansible, Docker, Kubernetes, and Terraform**.
* Strong database expertise in **RDBMS and NoSQL databases**, along with ORM tools like **SQLAlchemy**.
* Proficient in **backend testing** using **pytest and unittest**, implementing **message queues like RabbitMQ** for distributed task execution.
* Experienced in **log monitoring** and performance optimization using **Prometheus, Grafana, and CloudWatch**.
* Extensive experience in designing and implementing robust ETL pipelines using **Python, AWS services**, and **Databricks** for scalable and efficient data processing.
* Strong background in data cleaning, transformation, and analysis using **Pandas and Numpy.**
* Expertise in **Generative AI (Gen AI) applications for data engineering**, leveraging **LLMs (AWS Bedrock, OpenAI API) to automate data ingestion, transformation, anomaly detection, and natural language querying**.
* Experience in developing **AI-powered data quality checks, predictive scaling strategies, and self-healing ETL workflows**.
* Good Knowledge on migration of on-premises data to cloud implementing the pre and post validation for the data.
* Well versed with source code management tools like **Git** and **Bit Bucket**.
* Work with teams to resolve high-priority production incidents, ensuring minimal downtime.
* Identify and fix bottlenecks in database queries, API responses, and background jobs.
* Involved in sprint planning and grooming meetings for better understanding and planning the upcoming works.

**TECHNICAL SKILLS**

|  |  |
| --- | --- |
| Programming/Scripting Languages | Python 3, Python 2.7, JavaScript, Bash |
| Python Libraries | Pandas, Matplotlib, PySpark, BeautifulSoup, Numpy, Scipy, Pytest, Airflow, Pymongo |
| Relevant  Services/ Technologies/Tools | RESTful APIs, Celery, Web Sockets MS SQL, Teradata, PostgreSQL, Terraform, Ansible, Kubernetes, Docker, **Databricks**, Apache Spark, AWS Glue, Snowflake, PySpark |
| Web Frameworks | Flask, Django, Adaptable to JavaScript Frameworks(react). |
| Databases | MS SQL, Teradata, PostgreSQL |
| Operating Systems | Windows, Linux, Unix, MacOS |
| Cloud Technologies | AWS, Glue, S3, DMS, Lambda functions, Terraform |

**Work Experience:**

**Senior python developer June 2024 – Till Date**

**Blue Cross Blue Shield Association – Chicago, IL**

**Responsibilities:**

* Designed and implemented **Gen AI-enhanced** scalable data ingestion pipelines using AWS Glue, AWS Lambda, S3, and Databricks, incorporating **AI-driven anomaly detection** for incoming data streams..
* Leveraged **LLMs (Large Language Models)** via **AWS Bedrock and OpenAI API** to perform **automated data classification, summarization, and metadata tagging** before ingestion into AWS S3.
* Developed and optimized **AI-augmented** ETL workflows in Databricks (PySpark & Spark SQL), where LLMs assist in **dynamic schema evolution, auto-mapping transformations, and error resolution suggestions**.
* Integrated **Databricks with AWS services** (S3, Glue, Redshift, Athena) to enable **distributed data processing, real-time analytics, and cost-effective data lake solutions.**
* Built and managed **Delta Lake tables** in Databricks to ensure **ACID compliance, schema enforcement, and efficient data storage.**
* Identified and integrated **multiple data sources** (internal databases, APIs, streaming sources) into **AWS S3 and Databricks**, ensuring seamless data ingestion and transformation.
* Integrated **Gen AI-based predictive scaling** to dynamically allocate compute resources in Databricks, improving performance and cost efficiency.
* Implemented **serverless ETL pipelines** using **AWS Glue and Lambda**, leveraging **Step Functions** for workflow orchestration.
* Optimized **Spark jobs** (written in PySpark and Scala) using **partitioning, bucketing, caching, and query optimization** .
* Managed **secure data storage in AWS S3**, enforcing **encryption, access control policies, and versioning** to meet **compliance and security standards.**
* Developed **real-time streaming data pipelines** using  **AWS Kinesis, and Databricks Structured Streaming**, ensuring **low-latency data processing and event-driven architectures.**
* Implemented **CI/CD pipelines** using **Cloudformation, Git, and Codepipeline** for **automated deployment of Databricks notebooks, AWS Glue jobs, and infrastructure provisioning.**
* Monitored **pipeline performance and resource utilization** using **AWS CloudWatch, Datadog, and Databricks Performance Monitoring**, setting up **alerts and logging** for proactive issue resolution.
* Set up **AI-driven log analysis** using Datadog to detect patterns in pipeline failures and suggest optimization strategies.
* Integrated **Gen AI-powered feature engineering** pipelines, automating data transformation and feature extraction for ML models.
* Worked closely with **data scientists and analysts** to ensure **high-quality, well-structured, and query-optimized datasets** for advanced analytics and machine learning use cases.

**Environment: PySpark, Spark SQL, Databricks, AWS Glue, Lambda, Step Functions, S3, Redshift, Athena, Cloduformation,** Bedrock **,Delta Lake, Datadog.**

**Mid software developer May 2022 to April 2024**

**Technicolor India PVT LTD - Bangalore India.**

**Responsibilities:**

* Collaborated with cross-functional teams to design, develop, and implement high-quality data solutions on AWS that meet business requirements using **Python, PySpark, and AWS Glue**.
* Utilized **PySpark** for distributed data processing and handling large-scale datasets across multiple nodes on the **AWS ecosystem.**
* Built and optimized **ETL pipelines using AWS Glue to collect, transform**, and load data from various sources into data lakes, data warehouses, and other target destinations.
* Developed data wrangling tasks, including cleaning, transforming, and merging datasets using **PySpark and Python.**
* Implemented automated data processing **workflows using AWS Glue, reducing manual intervention and ensuring scalability.**
* Designed and deployed data validation checks in **AWS Glue pipelines to ensure data accuracy, integrity, and consistency.**
* Worked closely with the data science and analytics teams to understand their requirements and provide technical support using **AWS Glue and other AWS services such as S3, Athena, and Redshift.**
* Created unit and integration tests **for AWS Glue jobs and data pipelines using Pytest, ensuring the robustness and reliability of data solutions**.
* Leveraged **AWS Glue’s job** bookmarking and partitioning features to optimize **data processing and reduce processing times.**
* Built and managed **CI/CD pipelines, ensuring smooth release management and automated deployments using Jenkins and AWS CodePipeline**.
* Worked within an **Agile/Scrum framework to deliver continuous improvements to data pipelines and foster a collaborative development environment.**
* Provided ongoing maintenance, troubleshooting, and enhancements for existing **AWS Glue ETL jobs and data pipelines to accommodate evolving business requirements and ensure timely delivery of data products.**

**Environment:** **Python, AWS Glue, Amazon S3, PySpark, Cloud Watch, Git**

**Software Engineer Jan 2021 - May 2022**

**L&T Technologies and Services - Bangalore India.**

**Responsibilities**:

* Interacting with key business users, project stakeholders, technical team and functional consultants for gathering integration business Requirements.
* Implemented the server side logic code using **python and Django. Ensure back end code well organized and scalable to handle increasing user loads.**
* Design and develop **RESTful API endpoints using Django REST Framework, providing the necessary data and functionalities for the front-end.**
* Implement Create**, Read, Update, and Delete (CRUD) operations for managing job statuses and other related data.**
* Used **ORM** to communicate with **database. Manage migrations to apply changes to the database without losing data.**
* Create and implement intuitive user interfaces using React, ensuring a smooth and engaging user experience.
* Used **React to build reusable components**, making the development process more efficient and codebase easier to maintain.
* Involved in the database schema design that supports business requirements and ensure data integrity. Used indexing to optimize the performance.
* Performed regular tasks **such as backups, indexing, and performance tuning to ensure the database runs smoothly and efficiently**
* Develop reusable and **modular components to streamline the development process and maintain consistency across the application**.
* Implement secure authentication mechanisms, **such as JWT or OAuth, to protect user data and ensure secure access to the API**
* Ensure all sensitive **data is securely handled and stored, following best practices for data protection and privacy.**
* Write automated tests for **API endpoints to ensure reliability and prevent regressions**.
* Conduct manual testing to identify and resolve any issues that automated tests may miss.
* Set up and maintain **CI/CD pipelines for deploying updates and new features to the production environment.**
* Implement monitoring and **logging solutions to track the application's performance and identify any issues in real-time.**
* Created unit test framework to verify individual units of code and their interactions. Use testing frameworks like **PyTest.**
* Used Git to track changes in the codebase, **allowing multiple developers to collaborate without conflicts**
* Provide comprehensive documentation for the **API, facilitating ease of use for front-end developers and other stakeholders**

**Environment**: **Python, Django, PostgreSQL, HTML, CSS, reactJS, celery, PyTest GIT, JIRA.**

**Software Developer Sept 2016 to December 2020**

**Technicolor India PVT LTD- Bangalore India.**

**Responsibilities:**

* Participated in the requirement gathering and analysis phase in documenting the business requirements by conducting meetings with various business users.
* Design and maintain a consistent **API layer across various cloud service providers (AWS, Google Cloud, Azure)**
* Develop strategies to efficiently utilize pre-emptible VMs, ensuring cost-effective deployment and operation
* Implement solutions to deploy and manage **VMs across multiple regions and availability zones, enhancing reliability and scalability.**
* Develop and maintain the **REST API that allows Plough CLI to interact with Clearsky, ensuring seamless communication and integration.**
* Designed and implemented **RESTful APIs using Django REST framework, enabling seamless communication between Command line tool and back-end components.**
* Provide comprehensive documentation for the **REST API, facilitating ease of use for developers and users.**
* Ensure **the Plough CLI can effectively instruct Clearsky via the REST API, providing a user-friendly interface for managing the cloud fleet.**
* Performed code reviews to maintain code quality, **adherence to Django coding standards, and knowledge sharing within the Django development team**.
* Worked with containerization and orchestration technologies, **such as Docker and Kubernetes. Collaborated with the DevOps team.**
* Implemented authentication and authorization mechanisms such as **OAuth2, JWT, and API key authentication to secure APIs.**
* Implementing security measures such as authentication and authorization using **GCP Service account, OAuth, and API keys to secure APIs and ensure data integrity.**
* Proficiently utilized **Python and the Boto3** library to develop robust **AWS automation scripts** and custom solutions, **resulting in a 30% reduction in manual tasks and improved operational efficiency.**
* Gather user feedback on the **Plough CLI and Clear sky interactions, iterating on the design to improve usability and functionality.**
* Ensure Clear sky integrates seamlessly with the Tractor scheduler, facilitating the automated management **of cloud resources**
* Implement mechanisms within Clear sky to receive and act on target scale instructions from Plough, dynamically creating, maintaining, and destroying cloud resources as required.
* Implemented unites frame using python modules **Pytest** and **Unittest modules**

**Environment: Python, GCP, AWS, Pytest, Git, Django, Django rest framework, Big Query, Jira**.

**Education:**

**Bachelors in Electronics and Communication Engineering From JNTUA – 2016.**